We Claim:

1. An adapter for a catheter connector, the adapter comprising:

a rigid tube for insertion into the connector;

a lumen sized to permit a catheter that passes through the connector to also pass through the lumen; and

a thermally shrinkable wrap extending from the tube to form an extension section,

wherein the extension section is shrinkable to surround a portion of the catheter and to permit the catheter to move in a lateral and/or rotational direction.

2. The adapter of claim 1, wherein the tube has a distal portion that is insertable within the connector and wherein the extension section extends from the distal portion of the tube.

3. The adapter of claim 2, wherein the tube is sized to be securely clenched by a tightening segment of the connector.

4. The adapter of claim 3, wherein the tightening segment is a Touhy Borst valve.

5. The adapter of claim 1, wherein the connector is a Y adapter comprises at least one side port for passage of material into or from the catheter.

6. The adapter of claim 1, wherein a portion of the shrinkable wrap covers the tube and is shrinkable to a first diameter that is at least substantially the diameter of the tube and the extension section is shrinkable to a diameter that is at least substantially the diameter of the catheter.

7. The adapter of claim 1, wherein the shrinkable wrap comprises PTFE, Teflon®, FEP or PFA.

8. A catheter connector system comprising:

a connector having a bore, and

an adapter inserted in the connector, the adapter comprising:

a rigid tube for insertion into the connector;

a lumen sized to permit a catheter that passes through the bore of the connector to also pass through the lumen; and

a thermally shrinkable wrap extending from the tube to form an extension section,

wherein the extension section is shrinkable to surround a portion of the catheter and to permit the catheter to move in a lateral and/or rotational direction.

9. The system of claim 8, wherein a distal portion of the tube is inserted within the connector and wherein the extension section extends from the distal portion of the tube.

10. The system of claim 8, wherein the connector includes a tightening segment to securely clench the tube of the adapter.

11. The system of claim 10, wherein the tightening segment is a Touhy Borst valve.

12. The system of claim 8, wherein the connector is a Y adapter comprises at least one side port for passage of material into or from the catheter.

13. The system of claim 8, wherein a portion of the shrinkable wrap covers the tube and is reduced to a first diameter that is at least substantially the diameter of the tube and the extension section is shrinkable to a diameter that is at least substantially the diameter of the catheter.

14. The adapter of claim 8, wherein the shrinkable wrap comprises PTFE, Teflon®, FEP or PFA.

15. An intracorporeal medical device comprising:

a catheter system;

an operating head coupled to a distal end of the catheter system;

a connector having a bore through which the catheter system passes; and

an adapter inserted in the connector, the adapter comprising:

a rigid tube for insertion into the connector;

a lumen sized to permit the catheter system that passes through the connector to also pass through the lumen; and

a thermally shrinkable wrap extending from the tube to form an extension section,

wherein the extension section surrounds a portion of the catheter system and permits the catheter system to move in a lateral and/or rotational direction.

16. The system of claim 15, wherein the connector includes a tightening segment to securely clench the tube of the adapter.

17. The system of claim 15, wherein a portion of the shrinkable wrap covers the tube and is reduced to a first diameter that is at least substantially the diameter of the tube and the extension section is reduced to a diameter that is at least substantially the diameter of the catheter.

18. The adapter of claim 15, wherein the shrinkable wrap comprises PTFE, Teflon®, FEP or PFA.

19. The device of claim 15, further comprising a drive shaft extending within the catheter system and a drive system to rotate the drive shaft.

20. The device of claim 19, further comprising a control system to direct rotation of the drive shaft.